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**DEFENSE NUCLEAR AGENCY**

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26 March 1993

U. S. Nuclear Regulatory Commission  
Document Control Desk  
Washington, DC 20555

Gentlemen:

Attached is the Licensee Event Report (LER) for the reportable event that occurred on 4 March 1993 at the AFRRRI Reactor Facility, Docket Number 50-170, License Number R-84. The event was telephonically reported on that day to appropriate NRC offices. The event was investigated and corrective action was completed by 26 March 1993.

The point of contact for further information is Mark Moore, Reactor Facility Director, at 301-295-1290.

Attachment:  
as stated

Cy Furn:  
USNRC Region 1  
Attn: Mr Thomas Dragoun  
475 Allendale Road  
King of Prussia, PA 19406-1415

USNRC  
Attn: Mr. Marvin Mendonca  
Mail Stop 11B20  
Washington, DC 20555

Sincerely,

ROBERT L. BUMGARNER  
Captain, MC, USN  
Director

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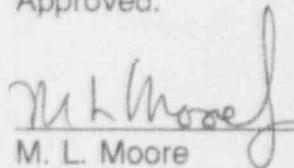
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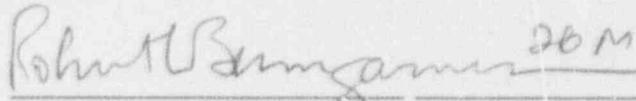
Licensee Event Report  
by the  
AFRRI TRIGA Reactor Facility  
Docket 50-170

Prepared by:  
Mark L. Moore

Approved:

  
M. L. Moore                      26 March 93  
Reactor Facility Director                      Date

Approved for release:

  
Robert L. Bumgarner                      26 MAR 93  
Captain, MC, USN                      Date  
Director

Abstract

A Senior Reactor Operator (SRO) completed a reactor experiment and shut down the reactor. After moving the core to the mid-pool position in preparation for the next experiment (with the reactor shut down), he left the control room with the key still in the console. He departed the facility shortly thereafter with the key still in the console. A second SRO returned to the facility a short time later, discovered the key, and secured the console. The first SRO was reprimanded on the failure to follow procedures, and the entire staff participated in a special training program on following procedures.

### Narrative Description of Event

On 4 March 1993 at approximately 1120, John Nguyen, a Senior Reactor Operator (SRO), finished a reactor exposure run using the TRIGA Mark F Reactor in exposure room one. He shut down the reactor, and in preparation for the next experiment to be performed by another SRO, he moved the core to the mid-pool position. Upon reaching the desired mid-pool position, he was interrupted by a phone call with a request for some specific information he had to retrieve from his office which is next to the control room. Although the reactor was in a shutdown mode, he had forgotten that the key was still in the console from the previous core positioning. Upon attempting to return to the control room, he was again interrupted by other staff members wanting him to go to lunch. He declined because he was required to return later that afternoon for an overnight low-power reactor run that he and two other staff members were scheduled to perform. Shortly thereafter, at 1135, he and other staff members departed the facility, leaving it empty and secure. Another SRO, SFC Michael Laughery, returned from lunch at 1145, entered the facility, and found the key in the console. He removed the key and reported the event to the Reactor Operations Supervisor (ROS). Shortly thereafter the RFD was notified as was the AFRRRI Director (the Licensee). After review, the event was considered to be a reportable occurrence under the Reactor Technical Specification 6.1.3.2[a.3].

### Assessment of Safety Consequences

The event occurred during normal duty hours. Reactor procedures require a licensed operator to be present in the control room when the key is in the console. A review of the reactor facility security computer demonstrated that no one had entered the facility during the time period in which the console with the key in it was unattended, which stayed empty until the second SRO returned. A review of the console historical log (a computer recording of events occurring on the console) for this time period showed that the reactor remained in a shutdown (scrammed) mode with no rod movement or power increase the entire period that the console with the key in it was unattended. Access to AFRRRI is controlled by security guards and an electronic card key system. Access to the reactor facility is controlled by an additional, independent electronic card key system. The reactor is located within an area protected by an additional cipher lock. All doors to the facility are kept locked, and therefore uncontrolled access is denied. Only authorized reactor staff members have access to these areas. These reviews confirmed that there were no adverse safety consequences as a result of this event.

### Description of Corrective Actions

Facility management investigated the circumstances of this event, and concluded that an operator error occurred, possibly because of fatigue due to multiple long runs (27 hours) occurring during the week and a phone interruption. The following actions were taken and completed by March 26, 1993.

1. The operator was reprimanded and cautioned that future failure to follow procedures would result in disciplinary action.
2. All operators were required to attend a detailed training class on the necessity to follow procedures. Emphasis was placed on the requirements to control access to the console keys and heightened overall staff awareness and attention to details.
3. All operators were instructed not to answer the phone for other than operational information while they were logged on the console.
4. In future operations when extended runs occur, the actual time on the console for each operator will be shortened with more frequent rotation of operators. Licensed operators have been directed to notify the ROS for console relief if they feel fatigued or under any circumstance that could distract them from giving full attention to the operations being conducted.

### Reference to Any Previous Similar Events

A complete review of facility records failed to show any similar earlier event.

### Point of Contact for Any Questions

Points of contact for further information are Mr. M. L. Moore, Reactor Facility Director or MAJ Christopher Owens, Reactor Operations Supervisor; telephone 301-295-1290.